LISTING OF THE CLAIMS

1. (Currently Amended) An image recognition system, comprising:

regularly disposed optical channels having at least one microlens and at least one detector that generate an image without employing additional image generating optics, ~~which~~ the at least one detector is situated in a focal plane thereof and extracts at least one image spot from a microimage behind the microlens, optical axes of the individual optical channels having different inclinations in such a manner that they represent a function of a distance of the optical channel from a centre of a side of the image recognition system which is orientated towards the image, by means of which a ratio of a size of a field of view to an image field size can be determined specifically, and

the at least one detector is used with a sensitivity such that the at least one detector has a pitch that is larger than an active surface area thereof, wherein the pitch of the microlenses differs from the pitch of the detectors in order to ensure a different inclination of the optical axes for the individual channels and wherein at least a part of the microlenses are anamorphic lenses which are different for each individual channel.

2. (Previously presented) The image recognition system according to claim 1, wherein each optical channel detects at least one specific solid angle segment of the object space as corresponding image spot so that a totality of the transmitted image spots on the detector allows reconstruction of the object.

3. (Canceled).

4. (Previously presented) The image recognition system according to claim 1, wherein the individual microlenses differ with respect to decentralization relative to the detector, a focal distance, conical and/or aspherical parameters and hence enable different inclinations of the optical axes.

5. (Previously presented) The image recognition system according to claim 1, wherein

microprisms which enable different inclinations of the optical axes are integrated in the individual microlenses.

6. (Previously presented) The image recognition system according to claim 1, wherein the individual microlenses are disposed on a base which has a convex or concave configuration and hence enable different inclinations of the optical axes.

7. (Previously presented) The image recognition system according to claim 1, wherein the detectors are disposed on a base which has a convex or concave configuration.

8. (Previously presented) The image recognition system according to claim 1, wherein the optical channels are free of off-axis aberrations for different inclinations of the optical axes.

9. (Previously presented) The image recognition system according to claim 1, wherein the individual optical channels have at least one of: (i) different pitch differences between microlens and detector; and (ii) at least one pinhole for correction of distortion.

10. (Previously presented) The image recognition system according to claim 1, wherein the image recognition system has a constructional length of less than 1 mm.

11. (Previously presented) The image recognition system according to claim 1, wherein a number of optical channels is in the range of about 10 x 10 to 1000 x 1000.

12. (Previously presented) The image recognition system according to claim 1, wherein a size of the optical channels is in the range of about 10 μm x 10 μm to 1 mm x 1 mm.

13. (Previously presented) The image recognition system according to claim 1, wherein the regular arrangement of the optical channels are packed tightly in at least one of: (i) a square, (ii) a

hexagon, and (iii) a rotational-symmetrical arrangement.

14. (Previously presented) The image recognition system according to claim 1, wherein the positions of the microlenses and of the detectors are precisely defined lithographically.

15. (Previously presented) The image recognition system according to claim 1, wherein the optical channels are optically isolated from each other.

16. (Previously presented) The image recognition system according to claim 15, wherein the optical isolation is effected by lithographically produced separating walls.

17. (Previously presented) The image recognition system according to claim 1, wherein the detectors are present as at least one of: (i) a CCD, (ii) a CMOS photosensor array, and (iii) a photosensor array comprising a polymer.

18. (Canceled).

19. (Previously presented) The image recognition system according to claim 1, wherein the optical channels respectively have a plurality of detectors of one or more different functions.

20. (Previously presented) The image recognition system according to claim 1, wherein pinhole diaphragms are disposed behind the microlenses and directly in front of the detectors and are positioned such that at least one pinhole diaphragm is assigned to each microlens.

21. (Previously presented) The image recognition system according to claim 20, wherein the ratio of the active surface of the detector to the active surface area of the microlens is adjustable in order to fix light strength and resolution power through the pinhole diaphragm.

22. (Previously presented) The image recognition system according to claim 20, wherein the pinhole diaphragms have a diameter in the range of about 1 to 10 μm.

23. (Previously presented) The image recognition system according to claim 20, wherein the pinhole diaphragm is produced from a metal or polymer coating or combinations thereof.

24. (Previously presented) The image recognition system according to claim 1, wherein the image recognition system has a liquid lens which is pre-connected between image and microlenses in order to adjust the field of view.

25. (Previously presented) The image recognition system according to claim 1, wherein light sources are disposed on or between the optical channels.

26. (Previously presented) The image recognition system according to claim 1, wherein a pixel is assigned to each optical channel.

27. (Previously presented) The image recognition system according to claim 1, wherein a plurality of pixels is assigned to each optical channel.

28. (Previously presented) The image recognition system according to claim 27, wherein a plurality of pixels with different properties or groups of pixels of the same properties are present.

29. (Previously presented) The image recognition system according to claim 27, wherein colour filters are disposed in front of a plurality of similar pixels.

30. (Previously presented) The image recognition system according to claim 27, wherein a plurality of similar pixels at a greater spacing is disposed in an optical channel in order to increase the light strength without loss of resolution.

31. (Previously presented) The image recognition system according to claim 27, wherein a plurality of pixels per optical channel is disposed such that the optical axes of at least two optical channels intersect in one object spot in order to enable a stereoscopic 3D photograph and/or a distance measurement.

32. (Previously presented) The image recognition system according to claim 27, wherein dispersive elements for colour photos are disposed in front of or on the microlenses.

33. (Previously presented) The image recognition system according to claim 27, wherein differently orientated gratings or structured polarisation filters are disposed in front of similar pixels of an optical channel in order to adjust the polarisation sensitivity.

34. (Previously presented) The image recognition system according to claim 1, wherein the image recognition system is combined with at least one liquid crystal element.

35. (Previously presented) The image recognition system according to claim 1, wherein the image recognition system is an integral component in a flatly-constructed small appliance taken from the group consisting of clocks, notebooks, PDAs or organisers, mobile telephones, spectacles or clothing items.

36. (Previously presented) The image recognition system according to claim 1, wherein the image recognition system operates to monitor security technology and for checking and implementing access or use authorisation.

37. (Previously presented) The image recognition system according to claim 1, wherein the image recognition system may be integrated in a camera in a chip card or credit card.

38. (Previously presented) The image recognition system according to claim 1, wherein the image recognition system may be integrated in equipment used for medical technology.

39. (Previously presented) The image recognition system according to claim 1, wherein the image recognition system monitors tasks in the interior and exterior of vehicles.

40. (Previously presented) The image recognition system according to claim 1, wherein the image recognition system may be integrated in equipment used for intelligent cockpit monitoring in the aircraft industry.

41. (Previously presented) The image recognition system according to claim 1, wherein the image recognition system may be integrated in equipment used for at least one of iris recognition, fingerprint recognition, object recognition and movement detection.